Applicant: Ron H. Farkash Attorney's Docket No.: 10964-049001 / PP 680

Serial No.: 10/004,713
Filed: December 5, 2001

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Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A fuel cell electrode comprising:

a plate having a front surface and a back surface, the front surface of the plate having a plurality of open gas distributions channels; and also having

a plurality of gas delivery holes formed through the plate including at least a first gas delivery hole and a second gas delivery hole; and

a plurality of gas exhaust holes formed through the plate <u>including at least a first gas</u>

<u>exhaust hole and a second gas exhaust hole</u>, the front surface of the plate having a plurality of open gas distributions channels, <u>wherein</u>:

at least a first one of the plurality of open gas distribution channels has a first end a first portion of which is connected to the first gas delivery hole at one end to a first one of the plurality of gas delivery holes and a second end at another end to a first connected to the first gas exhaust hole one of the plurality of gas exhaust holes and not connected to the second gas exhaust hole,

at least a second one of the plurality of open gas distribution channels has a first end a second portion of which is connected at one end to a the second one of the plurality of gas delivery holes hole and a second end connected to at another end to a the second one of the plurality of gas exhaust holes hole and not connected to the first gas exhaust hole, and

at least a third one of the plurality of open gas distribution channels has a first end a third portion of which is connected at one end to said to the second one of the plurality of gas delivery holes hole and a second end connected to the at another end to said first one of the plurality of gas exhaust hole holes and not connected to the second gas exhaust hole.

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2. (Original) The fuel cell electrode of claim 1 wherein the plate includes an equal number of gas delivery holes and gas exhaust holes.

- (Original) The fuel cell electrode of claim 1 wherein the plate includes two gas 3. delivery holes and two gas exhaust holes.
 - 4. (Canceled)
- (Currently Amended) The fuel cell electrode of claim 1 further comprising: 5. a second plate having a front surface and a back surface, the back surface of the second plate having a plurality of open air distributions channels, and also having
- a plurality of air delivery holes including at least a first of air delivery hole and a second air delivery hole; and
- a plurality of air exhaust holes formed through the second plate including at least a first air exhaust hole and a second of air exhaust hole, wherein the back surface of the second plate having a plurality of open air distributions channels,

at least a first one of the plurality of air distribution channels has a first end a first portion of which is connected to the first air delivery hole at one end to a first one of the plurality of air delivery holes and a second end connected to the first air exhaust hole and not connected to the second air exhaust hole, at another end to a first one of the plurality of air exhaust holes,

at least a second one of the plurality of air distribution channels has a first end a second portion of which is connected to the second air delivery hole and at one end to a second one of the plurality of air delivery holes and at another end to a second one of the plurality of air exhaust holes a second end connected to the second air exhaust hole and not connected to the first air exhaust hole, and

at least a third one of the plurality of air distribution channels has a first end a third portion of which is connected to the second air delivery hole at one end to said second one of the plurality of air delivery holes and at another end to said first one of the plurality of air exhaust

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holes and a second end connected to the first air exhaust hole and not connected to the second air exhaust hole.

(Original) The fuel cell electrode of claim 5 wherein the second plate includes an 6. equal number of air delivery holes and air exhaust holes.

7. (Original) The fuel cell electrode of claim 5 wherein the second plate includes two air delivery holes and two air exhaust holes.

8. (Canceled)

9. (Original) The fuel cell electrode of claim 1 wherein the front surface serves as an anode side of the plate.

10. (Original) The fuel cell electrode of claim 1 wherein the front surface serves as a cathode side of the plate.

11. (Currently Amended) A fuel cell system comprising:

a plurality of fuel cells stacked together, each having a first electrode, a second electrode, and a membrane sandwiched disposed between the first and second electrodes, wherein each first electrode includes a plurality of gas distribution channels on a surface thereof;

a plurality of gas delivery manifolds, each of which is connected to the plurality of channels of each of the plurality of first electrodes; and

a plurality of gas exhaust manifolds, each of which is connected to the plurality of channels of each of the plurality of first electrodes, wherein on the first electrode of each of the plurality of fuel cells,

at least a first one of the plurality of gas distribution channels has a first end-a first portion of the plurality of gas distribution channels is connected at one end to a first one of the plurality of gas delivery manifolds and at another end to a first one of the plurality of gas exhaust manifolds to a first gas delivery manifold and a second end connected to a first gas exhaust manifold and not connected to a second gas exhaust manifold,

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at least a second one of the plurality of gas distribution channels has a first end a second portion of the plurality of gas distribution channels is connected at one end to a second one of the plurality of gas delivery manifolds and at another end to a second one of the plurality of gas exhaust manifolds to a second gas delivery manifold and a second end connected to the second gas exhaust manifold and not connected to the first gas exhaust manifold, and

at least a third one of the plurality of gas distribution channels has a first end a third portion of the plurality of gas distribution channels is connected at one end to said second one of the plurality of gas delivery manifolds and at another end to said first one of the plurality of gas exhaust manifolds to the second gas delivery manifold and a second end connected to the first gas exhaust manifold and not connected to the second gas exhaust manifold.

- 12. (Original) The fuel cell system of claim 11 wherein the fuel cell system includes an equal number of gas delivery manifolds and gas exhaust manifolds.
- 13. (Original) The fuel cell system of claim 11 wherein the fuel cell system includes two gas delivery manifolds and two gas exhaust manifolds.
 - 14. (Canceled)
- 15. (Original) The fuel cell system of claim 11 further comprising a gas delivery valve connected to an outermost one of the plurality of fuel cells and configured to open and close over a portion of the plurality of gas delivery manifolds.
- 16. (Original) The fuel cell system of claim 11 further comprising a gas exhaust valve connected to an outermost one of the plurality of fuel cells and configured to open and close over a portion of the plurality of gas exhaust manifolds.
- 17. (Currently Amended)) The fuel cell system of claim 11 further comprising:
 a plurality of air delivery manifolds, each of which is connected to a plurality of air
 distribution channels on a surface of each of the plurality of second electrodes <u>including at least a</u>
 first of air delivery manifold and a second of air delivery manifold; and

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a plurality of air exhaust manifolds including at least a first of air exhaust manifold and a second of air exhaust manifold, each of which is connected to the plurality of air distribution channels of each of the plurality of second electrodes, wherein on the second electrode of each of the plurality of fuel cells,

a first portion of the plurality of air distribution channels is connected at one end to a first one of the plurality of air delivery manifolds and at another end to a first one of the plurality of air exhaust manifolds, a second portion of the plurality of air distribution channels is connected at one end to a second one of the plurality of air delivery manifolds and at another end to a second one of the plurality of air exhaust manifolds, and a third portion of the plurality of air delivery manifolds and at another end to said second one of the plurality of air delivery manifolds and at another end to said first one of the plurality of air exhaust manifolds

at least a first one of the plurality of air distribution channels has a first end connected to the first air delivery manifold and a second end connected to the first air exhaust manifold and not connected to the second air exhaust manifold,

at least a second one of the plurality of air distribution channels has a first end connected to the second air delivery manifold a second end connected to the second air exhaust manifold and not connected to the first air exhaust manifold, and

at least a third one of the plurality of air distribution channels has a first end connected to the second air delivery manifold a second end connected to the first air exhaust manifold and not connected to the second air exhaust manifold.

- 18. (Original) The fuel cell system of claim 17 wherein the fuel cell system includes an equal number of air delivery manifolds and air exhaust manifolds.
- 19. (Original) The fuel cell system of claim 17 wherein the fuel cell system includes two air delivery manifolds and two air exhaust manifolds.
 - 20. (Canceled)